

CLAIMS:

1. A filter for use in a closed vessel, comprising;

a porous tube located within said closed vessel, said tube having a tubular wall, a first
5 closed end and a second open end, and a filter media containment area within the interior of said
porous tube between said first and second ends;

a first roll of unused filter media and a second take-up roll for taking up the filter media
as it is spent in the process of operating said filter, said first and second rolls being located
within the containment area of said porous tube, a length of said filter media being wrapped
10 around the external surface or surfaces of said porous tube and being connected between said first
roll and second roll such that when said take-up roll is rotated, the spent filter media is rolled up
on the take-up roll.

2. The filter according to Claim 1 including, in addition thereto, a plurality of rollers

15 mounted on or near the external surface or surfaces of said porous tube to reduce the friction
between the external surface or surfaces of said porous tube and the filter media itself.

3. The filter according to Claim 2 including, in addition thereto, means for rotating said take-up roll as needed to thereby renew the filter media which wraps around the exterior surface or surfaces of said porous tube.

5 4. The filter according to Claim 3 including, in addition thereto, a passageway extending between said filter media containment area and the exterior of said porous tube to allow the media filter to pass between said first and second rolls and the exterior surface or surfaces of said porous tube.

10 5. The filter according to Claim 1 wherein said porous tube is circular in cross-section and has only a single external surface.

6. The filter according to Claim 1 wherein said porous tube is non-circular in cross-section and has a plurality of flat sides, each of said sides extending between the first and second ends of said porous tube.

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7. The filter according to Claim 2, wherein at least one of said plurality of rollers extends between the first and second ends of said porous tube.

8. The filter according to Claim 2 wherein each of said plurality of rollers extends
5 between the first and second ends of said porous tube.

9. The filter according to Claim 2 wherein said plurality of rollers are arranged in first and second spaced-apart sets, with a first set of said rollers being at or near the first end of said porous tube and the second set being at or near the second end of said porous tube.

10. The filter according to Claim 2 including, in addition thereto, a third set of rollers spaced intermediate said first and second sets of rollers.

11. The filter according to Claim 1, wherein said porous tube is comprised of ceramic.

12. A filter for use in a closed vessel, comprising:

a porous tube located within said closed vessel, said tube having a tubular wall, a first closed end and a second open end, and a filter media containment area within the interior of said porous tube between said first and second ends;

a first roll of unused filter media and a second take-up roll for taking up the filter media as it is spent in the process of operating said filter, said first and second rolls being located within the containment area of said porous tube, a length of said filter media being wrapped around the external surface or surfaces of said porous tube and being connected between said first roll and second roll such that when said take-up roll is rotated, the spent filter media is rolled up on the take-up roll; and

means for rotating said take-up roll within said porous tube within said vessel while said vessel is closed.

13. The filter according to Claim 12 including, in addition thereto, a plurality of rollers mounted on or near the external surface or surfaces of said porous tube to reduce the friction between the external surface or surfaces of said porous tube and the filter media itself.

14. The filter according to Claim 13 wherein said porous tube is circular in cross-section and has only a single external surface.

15. The filter according to Claim 13 wherein said porous tube is non-circular in cross-section and has a plurality of flat sides, each of said sides extending between the first and second ends of said porous tube.

16. A method for renewing filter media used with a filter for removing solids from a fluid within a closed vessel;

placing a source roll of filter media and a filter media take-up roll within the interior of an elongated filter tube;

rolling the filter media from the source roll around the perimeter of the filter tube until the filter media can be threaded back into the filter media take-up roll; and

rotating said filter media take-up roll to renew the filter media around the perimeter of said filter tube without opening up the closed vessel within which the filter tube is located.

17. The method according to Claim 16 wherein said filter is a candle filter.

18. The method according to Claim 16 wherein said filter is a dust filter.

19. The method according to Claims 16 wherein said filter is a cartridge filter.

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20. The method according to Claim 16 wherein said filter tube is circular in cross-section and has only a single external surface.

21. The method according to Claim 16 wherein said filter tube is non-circular in cross-

10 section and has a plurality of flat sides, each of said sides extending between the first and second ends of said porous tube.

22. The method according to Claim 16 wherein at least one of said plurality of rollers extends between the first and second ends of said porous tube.

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23. The method according to Claim 16 wherein each of said plurality of rollers extends

between the first and second ends of said porous tube.

24. The method according to Claim 16 wherein said plurality of rollers are engaged in first and second spaced-apart sets, with a first set of said rollers being at or near the first end of said porous tube and the second set being at or near the second end of said porous tube.

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25. The method according to Claim 16 including, in addition thereto, a third set of rollers spaced intermediate said first and second sets of rollers.

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